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Exploring the Impacts of Nature-based Learning on Primary-aged Students

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Introduction

For many years the idea of (re)integrating outdoor and nature-based learning experiences into schooling has been a goal for the Ottawa Carleton District School Board (OCDSB). Most recently, OCDSB has partnered with Ottawa Forest School (OFS) to provide a pilot initiative for select primary-aged classes (i.e., primarily K-3) to engage in learning experiences one day a week for 6 repeated weeks in a natural environment. This pilot and subsequent study is based on a growing body of research that has shown the mental, physical, emotional, and academic benefits of exposure to nature for children and adolescents.¹

In this project, we examine anecdotal evidence from 15 participating OCDSB and OFS teachers and administrators on the impacts of nature-based learning experiences on their respective elementary students. Participating teachers, who have been attending forest school over the past year (2015-2016) through this pilot initiative are, in their own words, “blown away” by the “transformative impacts” that this program has made on their students.

Methodology

For this qualitative study we looked at data gathered through four particular sources, including: online questionnaire, one-on-one semi-structured interviews teachers’ journals/artifacts of student learning; and a focus group with all participants. For the purposes of this UROP project, only a sample of the interviews were analyzed for preliminary findings.



Results

Several major themes were identified across the sample of interviews analyzed for this project. The emerging themes include but are not limited to:

1. Confidence

Many of the teachers noted an increase in their students’ confidence, self-esteem and self-regulation. Especially some of those students that struggled with classroom dynamic(s) appeared to flourish and take on leadership roles in an outdoor environment.

2. Group dynamic

There was a noted development of stronger group cooperation and collaboration for large scale projects and more full class activities. Some of the possible reasons put forward included: more room and ability for whole class participation in imaginative group building or imaginative play; and freedom from classroom constraints both physical and social.

3. Relaxation

Many of the children were observed to be more calm, relaxed, or less guarded, in the natural environment.

4. Symbolic vs. realistic viewpoints

The teachers noticed that the students art seemed to reflect a more realistic interpretation of natural elements rather than the cartoonish representations that are often typical of primary-aged students’ work.

5. Natural interest

Many students took greater interest and showed a higher level of lexical comprehension when it came to nature based vocabulary.

Literary Findings

The literature that was looked at showed extremely positive correlation between nature exposure and well-being. This was looked at for a number of different factors but not always directed at children and youth. Many of the studies reviewed focused on adult benefits, though some assumption of crossover can be made. It was consistently argued in literature that the modern shift to more urban, digital and sedentary living is likely having negative effects on our health.³ One article, specific to child development, examined *child play in un-manicured or constructed areas, suggesting the physical, psychological, emotional, and social benefits of having nature contact throughout and that nature connectedness, nature-based play, and risk-taking play are highly critical to healthy development.*¹

Discussion

Given the nature of this highly qualitative study, it might be suggested that the findings while supportive of existing literature, are not conclusive. Arguably though they do suggest that there is some benefit to nature-based play and outdoor learning with regard to student well-being and student engagement.

The research shows that, as a society, we have forgotten the benefits of nature connectedness.³ This is extremely valuable knowledge especially when it comes to how we educate our youth for both future wellness as individuals and for collective well-being as global citizens tasked with building more sustainable communities.¹

Our preliminary findings from the interviews suggest that participating teachers perceive an overwhelming benefit of nature-based learning on their students overall sense of well-being and their capacity to both self-regulate and take-risks in their learning. Participating teachers also feel valued and reinvigorated in being part of such a collaborative learning inquiry.

Conclusion

This pilot initiative between the OCDSB and OFS is providing elementary students who are attending a variety of largely urban schools with an otherwise limited opportunity to experience learning within natural places. Built on decades of Forest School pedagogy initiated in the UK, the OFS focuses on an emergent, play and inquiry-based approach to teaching and learning. This research contributes to broader discussions as to the value of these kinds of learning experiences on child development, cognitive, socio-emotional and physical. It also draws attention to the need to take into account children’s access to natural spaces in our planning of educational environments. Furthermore, the participating teachers have found this pilot experience to be a rewarding and useful tool in further developing and re/inspiring their own teaching practice.

References

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